



Arisaema

Michigan Botanical Club State Newsletter

<http://michbotclub.org/>

Corresponding Secretary's Report

In this issue, we look back at the Foray in the Saint Ignace area, look forward to the Mini-foray sponsored by the Southwest Chapter, get a sneak peak at the next annual foray and read about the activities of the Chapters. Thank you to everyone who contributed to this issue.

Reading the Chapter reports is a reminder of the work and attention that goes into putting together Club field trips and events. Please consider getting involved in helping at the Chapter and State levels, in whatever capacity you can. The state board is looking a treasurer. If you are interested, please contact Sarah Noodén at [REDACTED]

In October, the Southwest Chapter has expanded the usual Fall Meeting to a 1.5 day Mini-foray. There is a speaker, field trips and opportunities for us to see each other again.

The next issue of the Arisaema will be in the Spring when we look forward to another annual Foray, this time planned by the White Pine Chapter. A preview of the Foray is on page 9.

I would like to encourage all members to contribute their news about MBC members and events to the Arisaema. Awards, milestones, publications, travels, research, sightings and talks are all of interest. Photos of Chapter activities especially! Email your contributions to [REDACTED]

Respectfully Submitted,

Sheila Bourgoin, Arisaema Editor/MBC Webmaster and Corresponding Secretary

Spring Foray and Fall Meeting Schedule

YEAR	SPRING	FALL
2017	Huron Valley Chapter	Southwestern Chapter
2018	White Pine Chapter	Huron Valley Chapter
2019	State Board	White Pine Chapter
2020	Southeast Chapter	State Board
2021	Southwestern Chapter	Southeast Chapter

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Announcements

The MBC Treasurer Position Is Still Open

If you are inclined to working with figures and interested in participating at the statewide level of leadership in the MBC, please respond directly to the Nominating Committee Chair: Sarah Noodén at [REDACTED]

You would be expected to report at the State Board meetings which meet 3 times per year; in January, at the Foray, and at the Fall Meeting. The Treasurer has been wishing to retire for several years now and can coach you in all the details which are not terribly difficult. The 2 year term runs 1 January 2018 – 31 December 2019.

Find us on Facebook!

MBC has a thriving Facebook Page. Join us there too.

President's Report

One of the highlights of the year for members of the Michigan Botanical Club is the annual 4-day foray, typically held over the Memorial Day weekend. This year's Spring Foray was held in St. Ignace, MI, where botanists ventured out in a wide array of field trips—mostly in the Upper Peninsula.

We especially extend our thanks to our field trip leaders: Tony Reznicek, Fens and Other Calcareous Peatlands in the Eastern Upper Peninsula; Susan Fawcett, Ferns and Lycophytes; Elaine Chittenden and Bill Brodovich, Lake Huron Shoreline; Janet Traub and Jim Toppin; Introduction to Bryophytes and Lichens; Brad Slaughter, Peatlands of the Straits Region; Robert Routledge and Steve Baker, Orchids and Lake Huron Shore Wildflowers; Janet Traub and Jim Toppin, Bryophytes; Bob Smith, Photography Field Trip/Workshop; Michigan Nature Association Preserves, MNA. And gratitude is expressed to our speakers: Josh Cohen, "An Ecological Overview of the Straits;" Susan Fawcett, "How One Tiny Fern May Have Changed Global Climate and Other Pteridophyte Tales;" and Tony Reznicek, "The Beginnings of Botany in Michigan: From Thomas Nuttall (1810) to the Douglass Houghton Era (1830–1840)".

The Foray was also the perfect venue for the inaugural presentation of the Michigan Botanical Club Special Recognition Award to coauthors Joshua Cohen, Michael Kost, Bradford Slaughter, and Dennis Albert, for the major contribution to Michigan botany in the publication of *A Field Guide to the Natural Communities of Michigan* (Michigan State University Press, 2015). It was especially fitting since both Josh and Brad also contributed to the success of the Foray.

I also wish to express our appreciation to the Huron Valley Chapter Foray organizing team—Lynn Kirkpatrick HVC Foray 2017 Chairperson, Tony Reznicek for arranging the exceptional leaders; Sarah Noodén for lodging and meal planning; Toni Spears for club accounting and registration; Sheila Bourgoin for compiling the Arisaema and foray booklet; Larry Noodén for the bibliography and geological information; Irene Eiseman for Student Awards, what to bring and Natural Communities information; Julie Caroff for chairing the field trip facilitators and for lodging advice; Abe Cone for the beautiful botanical drawings; Robert Ayotte for contacting the Hanes Fund which continues to generously support our educational cause.

I have always felt that one of the strong-points of the Michigan Botanical Club is the wonderful array of field trips offered by our various Chapters, as well as the State-wide Foray. In an effort to emphasize the advantage of cross-chapter events, we have planned a MBC Fall Mini-foray – for October 7, 2017, at the Pierce Cedar Creek Institute, southwest Michigan, near Hastings. The Southwestern Chapter will be hosting this State-wide Mini-foray and we encourage the State-wide membership to come and enjoy a 1½ day time of exploring various habitats of early fall. The MBC State Board will also be meeting in the morning. A MBC dinner and botanical talk will be held in the PCCI dining room about 5:00 PM. If you haven't experienced one of their meals you are in for a treat. I will be giving the after-dinner talk entitled "In the Footsteps of 19th Century Naturalists: Plant Exploration on the Amazon." Check out the registration information here in this issue of the Arisaema.

Garrett Crow

President, Michigan Botanical Club



Spring Foray Report

Remembering Foray 2017

St. Ignace did not disappoint. The inn was quite full but the friendly staff, the amazing volunteers and the members' great attitudes made the Foray a success. In total, 118 people converged on Memorial Day Weekend to a great variety of field trips and interesting evening lectures. Our excellent leaders took us to beautiful northern sites and found exceptional plants. Saturday blessed us with beautiful weather and then some rain moved in on Sunday and our undaunted members kept exploring.

Straits Area of Mackinac provided many beautiful and unique plant communities just filling out for summer. As expected, *Iris lacustris* (Dwarf lake iris) was in full bloom. Highlights included numerous additional State Threatened plants like *Tetraneris herbacea* (Lakeside daisy) growing along the roadside, *Erigeron hyssopifolius* (Hyssop-leaved

fleabane), *Carex scirpoidea* (Bulrush sedge), *Equisetum scirpoides*, (Dwarf scouring rush), *Asplenium rhizophyllum* (Walking fern). Old favorites included *Primula mistassinica* (Bird's-eye primrose), *Polygala paucifolia* (Fringed ploygala), *Cypripedium parviflora* (Yellow lady-slipper) and many very showy *Castilleja coccinea* (Indian paintbrush). These are just a small sampling of what I saw. The many members on the other field trips saw more orchids, ferns, mosses and lichens; northern woody plants; shoreline and dune plants; others unique to limestone bedrock communities; and fen, marsh swamp and bog plants.

Please visit our website to view colorful photos and great memories from the Foray.

<http://michbotclub.org/list-of-past-spring-forays/>

Lynn Kirkpatrick, HVC Foray 2017 Chairperson



Fen walk led by Tony Reznicek.

Photo by Judy Kelly



Alumni sponsored students, 2017

Photo by Judy Kelly



Ferns led by Susan Fawcett.
Photo by Glenn Vande Water



Orchids and Wildflowers field trip.
Photo by Steve Baker



Fen trip led by Tony Reznicek
Photo by Lynn Kirkpatrick



Woody Plants led by Robert Ayotte
Photo by Lynn Kirkpatrick



MNA Preserves led by Andy Bacon

Photo by Sheila Bourgoin



Orchids and Wildflowers, led by Rob Routledge and Steve Baker

Photo by Sheila Bourgoin



Ferns led by Susan Fawcett

Photo by Russ Shipper



Foray 2017 Sponsored Students: Gregory Manni, Devani Antuma, Anna Wan, William Robertson, Laura Walker, Rosemary Kelley, Jacob Knapp, Tom Charney, Kailey Miller.

Photo by Lynn Kirkpatrick



2017 Foray Attendees

Photo by Bob Kelly

Awards from the 2017 Spring Foray

Two different awards were given at this year's Foray, the Special Recognition Award and the Distinguished Service Award.

The Special Recognition Award, which is brand new and was presented for the first time, recognizes persons who have made important contributions to our understanding of the botany of Michigan and the Great Lakes Region. It was awarded Friday night to Joshua G. Cohen, Michael A. Kost, Bradford S. Slaughter, and Dennis A. Albert for their book, *A Field Guide to the Natural Communities of Michigan*. This book, published by Michigan State University Press in December, 2014, is based on over 30 years of field work by staff of the Michigan Natural Features Inventory, much of it conducted by the authors. It is a concise and well-illustrated compendium of the natural communities of the state and has quickly become a "must have" text for ecologists and botanists, both professional and amateur.

Josh and Brad were present to receive their individual awards, 4 x 4 inch trillium flower art tiles from Weaver Tile in Horton, Michigan, which were mounted in quarter-sawn white oak frames with engraved brass plates. Mike and Dennis received their awards after the Foray, and each of the recipients' employers was notified about the award.



Photo: Mike Kost and Dennis Albert were not at the Foray to accept their awards. The photo above is the award for Mike Kost.

Photo by Judy Kelly



Dan Slean, (left) Brad Slaughter (center) and Josh Cohen (right) with their MBC Special Recognition Awards.

Photo by Judy Kelly.

The 2017 Distinguished Service Award was presented Saturday evening to Craig D. Elston of the White Pine Chapter. The formal nomination letter, written by White Pine Chapter President, Dorothy Sibley, is given below:

“Craig Elston has been a member of the White Pine Chapter since its formation on March, 1989. Our first WPC field trip was on May 6, 1989 when Dr. John Shontz led 15 of us through ravines along the Grand River that flows through the campus of Grand Valley State University. We enjoyed the many wildflowers in bloom on that day when suddenly it began to snow! I was following Craig, who began to laugh. He said that this always happens every spring at his Hudsonville Nature Center. After hearing about this nature center, guess what we did?

That’s right! In June, our brand new WPC members attended a wonderful field trip led by Craig Elston, the naturalist in charge of the Hudsonville Nature Center. Craig is also an excellent nature photographer, wildflower consultant, and master gardener. Over the years, Craig has led us on field trips at the nature center during different months of the year to see the ways the ecosystem changes with the seasons. This large center features bogs, streams, woodlands, and prairie areas. Craig has created and continues to work on a prairie area featuring a fantastic development of all types of Michigan prairie wildflowers.

Thus began our odyssey in following Craig throughout Michigan in search of wildflowers. He was with us in Northern Michigan and helped us identify the Michigan Monkey Flower, one of only 3 endemics that appear in Michigan, the Snow Trilliums in Lower Michigan, the Painted Trillium in Saginaw County, and the Blue-Eyed Mary in South Michigan. Craig has led us to prairie areas where he helped us locate Wild Lupine blossoms with Karner Blue Butterflies.

Craig is well known for presenting botanical programs. One of his outstanding programs illustrated the large burned area, caused by a forest wildfire, just south of Lake Superior five years ago. Craig created a photo documentary following the natural restoration of plant life for 2 years and how it affected the area. This program is remarkable, and should you wish to see it, contact Craig at [REDACTED]

In accordance with the MBC’s stated goals, Craig works hard to conserve native plants and educate the public. He donates many hours weekly at the Hudsonville Nature Center as naturalist. He works to maintain and upgrade the center, and spends some weekdays and most Sundays giving free tours to the public to increase their appreciation and understanding of natural areas.

Craig has been an inspiration to our White Pine Chapter members. He has been an MBC Director-At-Large for four terms. He is currently our WPC Vice President. Craig has helped our WPC members host MBC State Forays with his ideas, special planning, and enthusiasm. He has attended many MBC State Forays and brings his special display to tell everyone about the illustrated wildflowers.

We owe much of the White Pine Chapter’s success to the many years of dedicated service performed by Craig Elston. His continuing contributions of time and effort in helping the White Pine Chapter grow in membership and to serve his community are worthy of the 2017 MBC Distinguished Service Award.”

Craig was presented with a 4 x 8 inch Jack-In-The-Pulpit tile in a similar oak frame from Weaver Tile with an engraved brass plate. It was clear that a surprise presentation was accomplished!

Nominations for the 2018 Distinguished Service Award are due to Vice President Dan Skean ([REDACTED]) by March 1, 2018.



Craig Elston (right) with the 2017 Distinguished Service Award and Vice President Dan Skean, Awards Chair.

Photo by Judy Kelly.



Larry and Sarah Noodén, Lynn and Dave Kirkpatrick relax a bit before the Foray

Photo by Sheila Bourgoin



Spring Foray 2018

Get Ready for Spring Foray 2018! Mark your calendars! It's the White Pine Chapter's turn to host the Foray, and we are planning it for Memorial Day Weekend (May 25-28, 2018) in the beautiful Chain of Lakes region of Northwest Lower Michigan, centered in Antrim County. Shanty Creek Resorts will be serving as primary lodging and base of operations.

Folks from the botany and conservation communities in that corner of northern Michigan appear excited about an MBC visit, and Shanty Creek will graciously offer our group rate for an extra couple days to any members wishing to extend their stay and/or make a family vacation out of it. We anticipate a great adventure.

The Chain of Lakes Watershed includes a 75-mile-long waterway of 14 lakes and interconnected rivers across four

counties, eventually emptying into East Grand Traverse Bay. Among the botanically rich settings is Grass River Natural Area, where 7 miles of trails and boardwalk include cedar swamp, sedge meadow, and upland forest. Other preserves and properties in the area—several owned, managed and/or co-owned/co-managed by Grand Traverse Regional Land Conservancy—encompass Lake Michigan and inland lake shoreline, river and stream bank, coastal dune, meadow, shrub thicket, conifer swamp, and more.

We look forward to sharing and exploring this splendid area with MBC members. More information will be made available to Chapter Presidents as it becomes available, and watch for full details in the April 2018 issue of *The Arisaema*.

2018 WPC Foray Planning Committee

Michigan Botanical Club Fall Mini-foray

Saturday & Sunday, October 7 & 8, 2017

Pierce Cedar Creek Institute

Welcome to the MBC 2017 Fall Mini-Foray: The MBC, Southwestern Chapter is pleased to host the MBC Mini-foray at Pierce Cedar Creek Institute (PCCI) in Barry County, south of Hastings Michigan. It will be a one-and-a-half-day event including field trips and programs. There will be a dinner buffet Saturday evening followed by a lecture. For those interested, the PCCI is sponsoring a Sunday Brunch program that we may participate in.



Photos: Pierce Cedar Creek Institute Trails, www.cedarcreekinstitute.org/

A brief description of the geological and botanical history of Barry County

The landscape of Barry County is dominated by a series of sandy-gravelly end moraines formed during the retreat of the Wisconsin glaciation more than 10,000 years ago. As a result, Barry County is extremely hilly, compared to the rest of southern Michigan. Numerous “kettle-hole” bogs and fens

formed in depressions formed by ice blocks left behind by the receding glacier, both on the moraines and in the intervening areas of glacial outwash. Upland vegetation is characterized by oak forest and savanna, especially in the sandier end moraines and the glacial outwash in the southwest part of the county. However, beech-maple forest dominates the richer soils of the northwest corner of the county, which is typical of an extensive, flat till plain of ground moraine that covers much of mid-central Michigan. The biogeography of Barry County tells a rich story, where plants of northern and southern affinities overlap. Here it is possible to find cedar (*Thuja occidentalis*) swamps, uplands dominated by white pine (*Pinus strobus*), along with other indicators of a more northern character, like gaywings (*Polygala paucifolia*). In this same area these northern habitats abut the prairie-savanna landscape that proliferates to the south and west, supporting prairie species such as leadplant (*Amorpha canescens*) and false boneset (*Kuhnia eupatorioides*).

Pierce Cedar Creek Institute

Pierce Cedar Creek Institute (PCCI) is a nature center, environmental education center, and biological field station located on 742 acres just nine miles south of Hastings, Michigan, in rural Barry County. With its mission to inspire appreciation and stewardship of our environment, PCCI maintains its property as a preserve under an easement granted by the Southwest Michigan Land Conservancy and works to provide educational programs and seasonal recreation for community members of all ages.

Visitors to PCCI are encouraged to enjoy the nine miles of hiking trails, as well as seasonal exhibits featuring the work of local artists and the Pierce clock collection on display in the Visitor Center. The Institute's facilities include an auditorium, dining room, gift shop, classrooms, laboratories, and overnight accommodations.

Purpose: PCCI is a West Michigan biological field station that provides opportunities for research in the environmental sciences. It works with a consortium of 14 colleges and universities from Michigan and Indiana. Working with faculty from each of the consortium institutions, the Institute is able to provide funding for undergraduate research in the environmental sciences. It also welcomes environmental research projects from outside the consortium.

Trails: Eight nature trails, which are open from dawn to dusk, are available to wander and enjoy. The trails cross rolling glacial topography to a kettle-lake, fens, one of Michigan's southernmost white cedar swamps, and various upland forests. One can come and enjoy snowshoeing and cross-country skiing when winter snow arrives. Restrooms and trail maps are available at the Visitor Center from dawn to dusk.

*Mini-Foray Schedule***Saturday, October 7:**

Morning 9AM to Noon: MBC State Board Meeting in the education building

Field Trip to the Little Grand Canyon lead by Dave Warners

Noon: Box Lunch. (Advance order & payment required. See "MEALS" for details.)

Afternoon 1 to 4:30 PM:

Four Field Trips (See Field Trip Information)

MBC Dinner Buffet in PCCI dining room 5:00 PM (Advance reservation & payment required. See "MEALS" for details.)

Saturday Evening Program 6:00 PM in the auditorium

Sunday, October 8:

Morning from 9 AM to Noon: Field Trip lead by Tyler Bassett

Optional PCCI Sunday Brunch and Program: If you wish to participate please see their website or call the front desk.

PCCI INFORMATION AND DIRECTIONS:

Address: 701 W. Cloverdale Road, Hastings, MI 49058

Front Desk Phone: [REDACTED]

Webpage: www.cedarcreekinstitute.org

Directions: Directions are on the PCCI webpage or you can GPS the address.

(Note: Any other questions can be addressed to Dave Wendling, President of the MBC, SW Chapter at 269-366-8857 or email [REDACTED])

The MBC, Southwestern Chapter wishes to thank Michelle Skedgell, the Executive Director of PCCI, and her staff for making their facilities and grounds available to us and for all the help they have given us in preparing for this special event!

LODGING (Friday and or Saturday Nights)

At PCCI: Rooms are available for Hyla House and Prairie View. Hyla House has a fully stocked kitchen and includes an oven and range, full size refrigerator, coffee maker, etc. Prairie View does not have cooking amenities, but does have a mini fridge. They are both \$75 per person per night for single occupancy and \$55 per person per night for double occupancy. For reservations call Mel Bowman's Office at PCCI [REDACTED] or email [REDACTED]

In Hastings: There is a Holiday Inn Express in Hastings. For reservations call [REDACTED] Address is 1099 W. M-43 Hwy, Hastings, MI 49058.

MEALS

Saturday Box Lunch and Dinner Buffet: (Note: Advance Reservations and payment must be made by Monday, September 25th.)

To reserve a Box Lunch and/or a spot at the MBC Dinner Buffet on Saturday please contact Lynda Pelkey at 6909 Long Lake Rd, Berrien Springs, MI 49103 or call [REDACTED] or email [REDACTED]. Make the check payable to: **Michigan Botanical Club, Southwestern Chapter**. Box lunches are \$13 and will be available at our table at noon in the Visitors Center. The dinner buffet (\$16) will be served in the PCCI dining room at 5:00 PM. Your reservation and check must be received by September 25th. There will be no refunds after September 25th.

Optional Sunday Brunch and Program

This is a PCCI program that you can participate in if you wish. There are two seating's for the brunch in the dining room (11:30 AM and 1 PM). PCCI will hold seats for us at the 11:30 Brunch until September 15th. You can still sign up after that but a seat cannot be guaranteed. You can reserve your seat on the website starting around August 15th or call the front desk at [REDACTED]. Please mention that you are with the MBC. The brunch is \$19.

The PCCI program is free and runs from 12:15 to 1 PM in the auditorium. You need not attend a brunch to go to the program. Professor Jennifer Moore, a wildlife researcher from Grand Valley State University, will recount some of her escapades working with Anacondas, Tuatara, Boreal Toads, Eastern Massasauga Rattlesnakes, and Galapagos Lava Lizards.

PROGRAM AND FIELD TRIPS

Saturday Evening Program (6:00 PM in the Auditorium)

Garrett Crow will present “In the Footsteps of 19th Century Naturalists: Exploration for Aquatic Plants on the Amazon and Rio Negro.”

There has been a long interest in the mysteries held by the great and diverse Amazon basin beginning with the first successful transit of the great river in 1542 by Francisco de Orellano. Follow in the footsteps of naturalists Alexander von Humboldt, Alfred Russel Wallace, Henry Bates, Richard Spruce, and Richard Evans Schultes as we explore along the Amazon River and The Rio Negro, with a special eye to the diversity of aquatic plants of this great river system. Fascinating plants native to the Amazon basin like Water Hyacinth, Bladderwort, Salvinia, Cashew, Pineapple, Cassava, as well as many orchids and the amazing Amazon Waterlily are highlighted. And how does the diversity of our aquatic plants stack up against the Amazon? You might just be surprised.

After earning a BA from Taylor University in 1965, Garrett completed a M.S. and Ph.D. at Michigan State University. He spent his entire career teaching botany 33 years at the University of New Hampshire, Director of the Herbarium, and last 6 years as Department Chair. With a particular interest in aquatic and wetland plants his field research has allowed him to travel widely both in temperate and neotropical regions—particularly Costa Rica and Bolivia focusing on diversity of aquatic plants.

Having returned to Michigan upon retirement, he stays active botanically as Adjunct Research Botanist at MSU Herbarium (wrote up the bladderworts (*Utricularia*) and butterworts (*Pinguicula*) for Flora North America). And as Visiting Scholar in Biology, Calvin College, he is partnering with Dave Warners and Brad Slaughter on a fascinating historical project: A Field-based Retrospective Assessment of Emma J. Cole’s Grand Rapids Flora After 100+ Years of “Progress,” rediscovering Emma Cole’s collecting sites and comparing the flora of her day with that of the Greater Grand Rapids Area today. As of January 2017, he became President of the Michigan Botanical Club.

Saturday Field Trips

Note: You do not need to register for the field trips ahead of time. Sign up for a field trip at the MBC table in the Visitors Center when you arrive at PCCI. We will stage all our field trips at the MBC table in the Visitors Center at the starting time of the trip. Directions and carpooling will be provided.

Saturday Morning (9 AM to 11:30 AM)

UNUSUAL AND UNIQUE BARRY COUNTY HABITATS (Part 1) Trip Leader: Dave Warners

The Little Grand Canyon. Visit this impressive ravine system that has been largely protected over time because of its extremely steep slopes. Vegetation will be assessed as we walk down from the top to the bottom of the ravine on a gentle diagonal slope. We will note the change in microclimates as we proceed. Native ferns, wildflowers and graminoids will be highlighted within this lovely hardwood forest.

Trip Leader Biography: Dave Warners has been at Calvin College for 20 years, teaching a variety of general biology, botany, and ecology classes, while doing research and scholarship in field botany, plant evolution, restoration ecology, and ethics of creation care. Dave has recently partnered with Garrett Crow and Brad Slaughter on a project in which they are doing a 100-year retrospective of Emma Cole’s Flora of the Grand Rapids Region. Since 2009 he has also been co-directing Plaster Creek Stewards, a college-based watershed group focused on returning health and beauty to the Plaster Creek Watershed.

Saturday Afternoon (1 PM to 4:30 PM):

UNUSUAL AND UNIQUE BARRY COUNTY HABITATS (Part 2) Trip Leader: Dave Warners

Guernsey Lake Road Wetlands and Caves. Guernsey Lake Road rings the southern end of Fish Lake between S. Norris and Lindsey Roads. This is a very interesting landscape that features calcareous wetlands, rolling topography, lush woods, and even some small reportedly unglaciated caves. We will spend time visiting all these areas and discuss various strategies that have been implemented in attempts to preserve these unusual habitats.

THE DIVERSE NATURAL COMMUNITIES AT PCCI

Trip Leader: Brad Slaughter

PCCI hosts a variety of natural communities typical of southern Michigan, in addition to a regionally uncommon example of a closed-canopy northern white-cedar swamp. We will walk the trails and explore a variety of upland and wetland habitats in search of late fall-blooming species and anything else that catches the eye. Bring footwear appropriate for wet, mucky ground for brief off-trail excursions.

Trip Leader Biography: Brad Slaughter joined Orbis Environmental Consulting in April 2017. He is a co-author of the 2014 “A Field Guide to the Natural Communities of Michigan”—and has also authored several papers published in *The Michigan Botanist* and dozens of technical reports on Michigan’s natural communities, rare plants, native flora, and other conservation-related topics. Brad also serves on the State of Michigan’s Rare Plant Technical Advisory Committee. He earned a B.A. in Biology from Albion college in 2002 and a M.S. in Botany from Miami University in 2005.

BARRY STATE GAME AREA--YANKEE SPRINGS RECREATION AREA

Trip Leader: Tyler Bassett

The Barry State Game Area and Yankee Springs Recreation Area support a diversity of prairie-like habitats: primarily black oak barrens with dry sand prairie openings, and prairie fens. We will walk through a barrens complex being restored primarily through fire, and look out for some of the fading asters and goldenrods of the season; and then proceed to take in the grandeur of one of the many prairie fen wetlands of this diverse landscape.

Trip Leader Biography: Tyler Bassett has a deep love of the plants and plant communities of southwest Michigan. He earned a B.S. in Biology from Western Michigan University in 2000, and a PhD in Ecology from Michigan State University in 2017. In between, he cultivated his skills as a botanist and ecologist, informing conservation and management of natural habitats through work with the Kalamazoo Nature Center, Michigan Natural Features Inventory, and ecological restoration firm, Native Connections. He is currently a research associate at Michigan State University, studying the conservation and restoration of native plant communities, particularly prairies and oak savannas.

AN INTRODUCTION TO PIERCE CEDAR CREEK INSTITUTE

Trip/Program Leader: Corey Lucas

Join Corey Lucas for a relaxing afternoon program that highlights the many reasons Pierce Cedar Creek Institute's property is a destination for nature enthusiasts of all kinds. It will be an opportunity to explore the unique habitats on the Institute's property through a virtual tour presentation. Corey will also introduce ongoing and future restoration projects, and current invasive species management activities that are occurring throughout the property. The program will

conclude with a guided tour of the Institute's demonstration gardens where native Michigan flora will be examined and discussed.

Trip/Program Leader Biography: Corey Lucas is the Stewardship Manager at Pierce Cedar Creek Institute. Prior to joining the Institute he worked for the Michigan Department of Natural Resources (DNR) Wildlife Division in the deer hunter program, particularly helping to monitor for Chronic Wasting Disease. Corey, a Barry County native, received his bachelor's degree in biology from Western Michigan University. Corey's previous experience working for the DNR also includes positions in the Waterfowl and Wetland Program and the Eastern Box Turtle Research Project. Additionally, Corey spent 14 years as a civil engineer working on over 600 design projects. He also worked in the agriculture industry for six years. Along with extensive experience, Corey brings a passion for conservation and land management to the Institute.

Sunday Field Trip:

Sunday Morning (9 AM to 11:30 AM):

DRY SAND PRAIRIE RESTORATION FROM A RESTORATION ECOLOGIST'S POINT OF VIEW

Trip Leader: Tyler Bassett

We will take a tour through several of the habitats found at PCCI, with a focus on prairies. We will discuss ongoing efforts to plant upland prairie in former agricultural fields on site, and also visit a remnant dry sand prairie undergoing restoration. These prairie perspectives will be punctuated by walks through several forest types, including beech-maple, oak, and floodplain forests.



Huron Valley Chapter Year in Review 2016-2017

Our evening meetings are held the third Monday of each month from September through April (excepting December) at 7:30 in the Matthaei Botanical Gardens Auditorium. They are open to the public and advertised through the Gardens as part of their public education efforts. See: <http://michbotclub.org/huron-valley-chapter-past-events> for details

Evening Programs 2016 – 2017:

September 19 – Frank Omilian: “The Rubiaceae Ant-plants of Southeast Asia, Luxury Condominiums for Ants.”

Frank is a retired college biology instructor who has had a life-long interest in plant diversity. Large numbers of plants have symbiotic relationships with ants but ant plants take it to a new level. The swollen bases of these plants make a number of different kinds of chambers for the ants (some to live in and others for wastes) as well as ant entry holes in the base and tunnels connecting everything. These are amazing products of evolution, and Frank led us on a tour through their diversity, evolution and structures.

October 17 – Shaun Howard: “The Michigan Dune Alliance: Restoring Eastern Lake Michigan Coastal Ecosystems.”

Shaun is the Eastern Lake Michigan Project Manager for The Nature Conservancy, coordinating dune restoration, among other things. The Great Lakes contain the world's largest freshwater dune systems, totaling 275,000 acres of perched, parabolic, and linear dunes with the majority of these ecosystems located along Eastern Lake Michigan. Nearly 10% of Michigan's rare species occur on dunes, but dunes also play a key role in Michigan's growing eco-tourism economy through the numerous recreation and quality of life benefits it offers. Shaun noted the complex threats facing our dunes and outlined efforts by the Michigan Dune Alliance to protect and restore this globally-unique landscape.

November 21 – Amanda Meier: “The Far-Reaching Effects of Soil Fungi on Plant-Insect Interactions.”

Amanda is a Doctoral student in Ecology and Evolutionary Biology at the University of Michigan studying plant animal (and fungal) interactions. Mycorrhizal fungi associate with over 80% of all plant species and provide plants with nutrients in exchange for sugars from the plant in a mutually beneficial relationship. Mycorrhizal fungi play a crucial role in interactions among plants, insects, and the predators of insects above-ground, which she is studying now in milkweed (*Asclepias*) species -- with some important and conclude with comments on why we should consider mycorrhizal fungi in our own natural landscapes.

January 16 – Rachel Maranto: “Wildflowers of Michigan Nature Association Sanctuaries.”

Rachel is the Southeast Lower Peninsula Regional Stewardship Organizer for the Michigan Nature Association, and following the tradition of our recent Annual Winter Pot Luck meetings, people met for dinner at 6:00, and then enjoyed a program highlighting several Michigan Nature Association sanctuaries in southeast Michigan and beyond with excellent wildflower displays across a variety of habitats. Rachel also alerted us to how we can help MNA with botanical survey efforts at these sanctuaries and other properties statewide.



February 20 - Carol Clements: “Ferns of Southeast Michigan.”

Carol is a Wayne County Parks naturalist and manager of the Nankin Mills Interpretive Center in Westland. Michigan is home to over 70 species of ferns, with over 40 species in our area. Carol focused on some of the unique characteristics that will help you distinguish these botanical treasures, and noted some of the surprising species diversity in southeast Michigan parks.

March 20 -- Tony Reznicek: “Exposing the Clandestine Relationships Among Our Michigan Plants --Newer DNA-Based Classifications.”

Tony is a Curator of Vascular Plants at the University of Michigan Herbarium, and noted that we live in exciting times for biology, because we can now study organisms by directly accessing their genetic material, rather than using indirect (and usually imprecise) methods. So we have gained a huge amount of understanding of relationships among plants and groups of plants in a short period of time. Some of the new information we have unearthed has illuminated some extremely interesting aspects of our flora including survivors from ancient floras that pre-date the split between monocots and dicots. However, because our system of naming plants is tied to their relationships, this can result in some name changes.

April 17 Dr. Daniel E. Moerman: “Why These Medicinal Plants?”

Dan is Professor Emeritus Anthropology, University of Michigan-Dearborn and has extensively studied uses of plants by Native North American Indigenous people. Roughly 10%

of the some 26,000 species found north of the Rio Grande were used by the native peoples. Why did they pick this 10% rather than some other 10%? Interesting facets include that many plants found in ornamental flower gardens are plants which were (and sometime are still) used as medicines by native peoples. The large database on plants used medicinally by native peoples compiled by Dan is available online (at <http://naeb.brit.org>).

July 10, SPECIAL SUMMER TALK -- Don Drife: "The Milkweed Community"

Don is an Independent Naturalist, Blogger, superb photographer and SEC-MBC member: 'The Michigan Nature Guy.' Everyone knows about the Monarch Butterfly and its needs for milkweed plants to survive. But many other insects and some non-insects also make their home in the milkweed community. Don presented a program on the many organisms which feed on and among the different species of milkweeds, and those that make passing visits. The Huron valley Chapter was a co-sponsor of this program with the Herb Study Group.

2016 Field Trips:

Saturday, August 27th at 10:00 am - 12 pm Restoration of Oak Savanna at MacCready Preserve. Trip Leader: Lars Brudvig

Professor Lars Brudvig gave participants a very interesting overview of the geologic and forest history of the 408 acre MacCready Preserve, and the Michigan State University management prescriptions that began in 2010. Lars listed a wide diversity of inherent ecosystem types; our focus being oak-savanna and fen. In the late 19th Century, the land was obtained by Thomas C. MacCready, and was intensively managed as farm. Three generations later, in 2001, Douglas, Lynn, and Willis MacCready donated the land to Michigan State University for the purpose of land management studies and recreation.

Saturday 15 October 1:00 p.m.-4:00 p.m. Workday and Botanizing at Horner Woods Trip leader: Dr. Sylvia Taylor

The fall Horner Woods field and work day included six Botanical Club members, two, U of M freshmen Environmental Studies students, two U of M Restoration Ecology Masters students, one Matthaie Botanical Gardens student caretaker and one person who had seen the announcement and came because she wanted to learn about the place. Pelton Marsh had lower than usual water levels this year, we took advantage of our ability to remove invasive Glossy Buckthorn from the usually hard to work muddy band surrounding the wetland. Besides admiring the ecosystems, hundreds of young Bittersweet, Common Buckthorn and Burning Bush plants were collected and carried out in bags.

Saturday 22 October 10 a.m. - 1:00 p.m. Fall Woody Plants of Radrick Forest Trip Leaders: Neal Billetdeaux and Robert Ayotte

Robert and Neal explained that we would be walking along parts of the Defiance moraine and that the entire area had been cut over about 1820. We observed three different ecosystems along the way – White Oak/Outwash Channel/Silty Loam; Black Oak/Outwash Channel/Medium coarse sand; and Red Oak/Moraine/till/Clay Loam. As their names imply, the dominant woody plants in each ecosystem were dependent on the characteristic soil and terrain features, after which we began a more in depth study of woody plant identification. The forest was made especially lovely by the fall colors at their peak.

2017 Field Trips:

Saturday 28 January, 10 am to 1 pm Winter Woodies of Waterloo. Field Trip Leaders: Neal Billetdeaux and Robert Ayotte

January is one of the best months for identifying and appreciating the woody plants of Southeastern Michigan. Neal and Robert led fourteen MBC members to see the upland forest and bog floras of this diverse glacial terrain. We saw oaks along the ridges and tulip-tree *Liriodendron tulipifera* in the more mesic (moister) areas on either side of the esker. Neal gave us a primer on identifying red, white, and black oaks *Quercus rubra*, *Q. alba*, and *Q. velutina*, complete with twigs and acorns.



Photo by Sheila Bourgoin

Spring Botany and Horner's Woods Workday I & II. Saturday 22 April, 1:00 to 4:00 pm; Saturday 20 May, 1:00 to 4:00 pm. Trip Leader: Sylvia Taylor

Volunteers from the Michigan Botanical Club and Matthaie Botanical Gardens and Nichol's Arboretum joined forces to scout for the invasive garlic mustard and help with light trail maintenance at Horner Woods, a wildflower sanctuary NE of Matthaie Botanical Gardens. As always, there was time to see and study many of the native wildflowers that generated the protection of this special site, especially large patches of a lovely native wildflower, Twinleaf, *Jeffersonia diphylla*.

The 2017 Spring Foray This spring, responsibility for the Foray rotated to the Huron Valley Chapter. Though the Foray will be written up as a separate item, I'd like especially to

thank our HVC Organizing Committee: Lynn Kirkpatrick, Chair, Robert Ayotte, Sheila Bourgoin, Julie Caroff, Irene Eiseman, Larry Noodén, Sarah Noodén, Tony Reznicek, and Toni Spears. We also want to thank Abe Cone for the lovely drawings. Rosemary Kelley, University of Michigan (2017) aquatic ecology and geochemistry, was HVC's sponsored student at the Foray.

Goose Creek Michigan Nature Association Sanctuary,
Sunday 4 June -- 1 p.m. to 4 p.m. Field Trip Leader: Tony Reznicek



Photo by Rachel Marranto

Goose Creek Grasslands Nature Sanctuary extends over three-quarters of a mile from southeast to northwest along Goose Creek, and includes many diverse habitats. Saturated soil, wet prairie, marsh, and fen habitats are all found within the sanctuary's boundaries, allowing for a wide range of plant and animal species to exist. Over two hundred plant species have been identified at Goose Creek Grasslands, including seven that are listed as rare. Sedges are abundant among many fen plants, including buckbean and pitcher plant. A highlight was the sedge *Carex viridistellata*, described as new to science as recently as 2013!

Saturday June 10, 2017 10 a.m. – 12 p.m. Shiawassee Basin Preserve. Field Trip Leader, Mike Losey, Natural Resources Manager for Springfield Township. Joint with SE Chapter

The Shiawassee Basin Preserve is a 514 acre Springfield Township park located just north of Davisburg. Notably, this preserve helps protect one of the largest and highest quality prairie fen complexes in the Midwest. Numerous rare plants and animals can be found at the preserve, including the largest remaining population of Poweshiek skipperling, a federally endangered prairie butterfly. In addition to seeing plants, this trip showcased the response of plant communities to various management techniques.

Saturday 15 July – 10 a.m. to 1 p.m. Aquatic Flora of Mill Lake. Field Trip Leader: Erick Elgin, Water Resources Educator, Michigan State University Extension.

Mill Lake is a shallow lake located in the Waterloo State Recreation Area. The lake has a large littoral zone and a

watershed that is partially protected, making it an excellent location to observe the wonderful diversity of plants under the water's surface. Participants covered the importance of aquatic plants to lake ecosystems and spent time identifying floating-leaf and submerged aquatic plants.



Photo by Diana Newman

Awards go to Chapter Members:

Congratulations to Toni Spears and Sheila Bourgoin

Toni Spears was awarded the Bob Grese "Deep Roots" Award by the Ann Arbor chapter of the Wild Ones! Well deserved, she is their program chair, works tirelessly removing invasives from the Huron Clinton Metroparks, speaks at the Metroparks Board of Commissioners meetings on behalf of having rich with flowers meadows instead of a "golf course" look, and on behalf of the flora and fauna that makes up that richness. Toni serves as the Huron Valley Chapter treasurer.

Sheila Bourgoin was given the "Bee-Green" award by the City of Saline at the City Council Meeting November 14. Saline's environmental commission started this program this year to promote environmental awareness. Sheila is known for promoting native plants in gardening, natural area preservation, rain gardens and reduced mowing in city parks. Sheila is an HVC Director-at-Large, Content Manager of the MBC website, also incoming MBC Corresponding Secretary, and HVC Refreshment Coordinator.

Outreach efforts:

Besides helping various groups with Stewardship efforts, most notably and directly at Horner woods, we also provide support and expertise for efforts at various other areas in SE Michigan and the Huron River watershed. This year, Chapter members regularly attended the Huron-Clinton Metroparks Board of Commissioners meetings to object to push for better ecosystem management generally in the Metroparks system.

Tony Reznicek, Huron Valley Chapter President

Great Lakes Chapter Report 2017

In August of 2016 our chapter had the pleasure of visiting the Whitehouse Nature Center on the campus of Albion College. Trip leaders, Dan Skeen, Professor of Botany, and Barbara Raffail, Professor of Biology, provided a tour of the Nature Center and led the group along a nature trail that used to be part of the Interurban Railway. The highlight was a visit to a prairie restoration site that bloomed with *Baptisia lactea*, *Helianthus mollis*, and *Liatris spicata*, *Eryngium yuccifolium*, and grasses such as *Sorghastrum nutans*, *Andropogon gerardii*. The East Branch of the Kalamazoo River borders the property with several stands of native wild rice, *Zizania palustris*. We thank Jim Hewitt for suggesting a visit to this site and coordinating the logistics.

At our September GLC Board Meeting there was interest in conducting a Membership Survey in conjunction with our 2016 End-of-Year Newsletter. Participation was quite good with a 60% response rate. The survey was designed to seek feedback from members on how to build our chapter to serve the needs of its members. Results were insightful, especially the open comment sections. In summarizing, 1) most members joined GLC to receive The Great Lakes Botanist, (kudos to Mike Huft on bringing TGLB to prominence, 2) many members would welcome more information about botanical events occurring throughout the Great Lakes area, as well as newsletter articles on plants, conservation efforts, chapter projects and member activities, 3) field trips would be nice, if local, 4) social media is not commonly embraced, although online botanical searches and databases are useful.

Recognizing that the internet is a simple and efficient path for information sharing, we embarked on a one-year pilot program in 2017 using iNaturalist.org, an online plant identification database with mapping features and photo sharing. A special GLC project page "Great Lakes Chapter (MBC) Cyber Foray 2017!" was set up by Derek Shiels for members to input their plant queries and build a select botanical data page. A tally of species and top contributors will be compiled at the end of the year. An MBC project page was launched to capture plants observed during the St Ignace 2017 Spring Foray, 85 species and counting. We welcome you to visit <https://www.inaturalist.org/projects/great-lakes-chapter-mbc-cyber-foray-2017> and encourage you to add your favorite foray photos. Contact Derek at [REDACTED]

This year's Spring Foray, was an extraordinary event. GLC had a record 27 members in attendance, with several participating as field trip leaders, facilitators, and evening speakers. We also were able to sponsor two students, Tom Charney and Kailey Miller from the Plant Biology Department of Michigan State University. We are grateful for the generous funding from the Michigan Botanical Foundation and the Joan Robb Student Foray program for making the sponsorship possible.

Irene Eiseman, Great Lakes Chapter President

Southeastern Chapter Report 2016-2017

The SEC meets on the first Sunday afternoon of the month at 2 pm in the Visitor's Center at Heritage Park in Farmington Hills. Heritage Park is a lovely undisturbed valley of 211 acres on the Rouge River and features 4 miles of hiking trails through woodland, meadow and wetland habitats and a nature center. We invite all MBC members and friends to visit Heritage Park and join with us for our monthly programs.

The fall programs of the Southeastern Chapter began in October with "The Milkweed Community: More Than Monarchs" by SEC members Don and Joyce Drife. This program featured the excellent photography of the Drife's as they showed us the many organisms they have observed feeding on different species of milkweeds. In November, Ryan Colliton, Natural Resources Coordinator for the Huron Clinton Metroparks, discussed some of the unique species and habitats found within the 13 Metroparks. He also discussed the management strategies used to protect them such as prescribed burns, invasive species control and population monitoring. A lively question and answer session followed with attendees voicing concerns about some recent Metroparks policy changes involving conservation issues. Lawrence Falardeau presented our December program "Genevieve Gillette: First Lady of State Parks." Mr. Falardeau, an artist and landscape architect, is involved with the Friends of Highland Recreation Area. In the 1940s Genevieve Gillette fostered the purchase of the former Edsel Ford estate at Haven Hill by the State of Michigan to become part of the Highland State Recreation Area. She also established important conservation groups, gained funding for Michigan state parks, and even advised President Lyndon Johnson on recreation and nature.

We had our traditional potluck meal in February after which we viewed the video entitled "Kissing Cousins and Family Skeletons: the Plants of Michigan and Modern Evolutionary Biology." Dr. Tony Reznicek first presented this program to the Huron Valley Chapter on Feb. 16, 2016. His slides and narration were made into a DVD which was then made available to other chapters. Tony explained how relationships between plants were determined in the past mostly by physical characteristics and how recent DNA analysis is revealing why some plants have to be moved into new genera or even families to show their new relationships.

"Natural Areas of Springfield Township: Interesting Features and Conservation Opportunities" by Mike Losey, was the program presented in March. As the Natural Resources Manager for Springfield Township, in northwest Oakland County, Mike described some of the high quality natural areas found there and what efforts are being taken to conserve them. A companion field trip was held in June to a prairie fen complex in the Shiawassee Basin Preserve near Davisburg, led by Mike.



Shiawasee Basin Preserve Field Trip. Photo by Kat Dougherty

In April, Cheryl M. English presented “Pollinator Preservation Strategies for the Home Garden: Native Plants and Their Unique Relationships with Beneficial Insects.” Cheryl, an Advanced Master Gardener and a popular author and educator in the metro Detroit area, explained how through selection of native plants for the home garden we can help sustain our native pollinators including butterflies, moths, bees, and beetles. Using her own Detroit city lot as an example she offered practical advice on garden design and maintenance. Additionally she invited members to her garden tours in June and August.

Thirteen members of the SEC attended the annual State MBC Spring Foray in May including 3 of our sponsored students from the 2016 Foray. Three additional students from University of Michigan-Dearborn were sponsored in 2017.

Additional Chapter field trips were offered to view the North American Lotus at Lake Erie Metropark on August 5, and to Palmer Park in Detroit, led by Bill Brodovich, on August 19.

Check out our SEC page on the MBC website. We strive to keep it up-to-date. In addition to our sponsored programs and trips we continue to promote the environmental and educational programs of the many other groups in the metro Detroit area who offer them. We have had many new visitors to our programs this year and hope to continue to offer programs of interest to both seasoned and beginning plant enthusiasts.

Emily Nietering, Southeastern Chapter President

White Pine Chapter Year in Review 2017

This has been the 28th year since our White Pine Chapter was founded, and it has been an exceptional year for our members. During this year, our members have enjoyed the talents of some of the best known botanists in our country. During the winter season we have listened to renowned speakers at GVSU who have illustrated their programs with

excellent color photos. During the spring and into the fall, we have been led to new botanical areas by experts who point out notable plant species and discuss the plant for our edification. Throughout this year, many of our own WPC members have assisted in helping us to learn more about plants and ecology. I want to thank all of these leaders who have made this year a great success.

Our WPC 2017 schedule featured both programs and botanical field trips to wetlands, prairies, sand dunes, bogs, fens, marshes, savannas and woodlands throughout West Michigan. With the variety of ecological areas near us, we will never be at a loss to find yet another new area to investigate and to discover

unusual wildflowers, bushes and trees. We also locate many birds and mammals.

The WPC members meet during late fall and winter at Grand Valley State University once a month. We hold our meetings usually at Niemeyer Hall. Our chapter was founded on April 15, 1989, and Dr. John Shontz helped us by securing a room at GVSU for our monthly meetings. With his assistance, we were able to grow in membership and present programs and lead field trips. The university has always allowed us to serve refreshments, use a room free of charge, and to use all the audio-visual equipment. We owe a debt of gratitude to the university for their support.

After Dr. John Shontz retired in 1909, Dr. Mark Luttenton, GVSU Botany Professor, became our mentor. He assigned us to a new Room 220 for our next meetings. We are privileged to have Dr. Luttenton to help us.

On January 14, at GVSU, our Annual Photo Fest was scheduled to give our members a chance to share their photographic skills with everyone. We have many talented photographers in our chapter, and every year they bring new and different samples of their lovely photos. After all of us gathered in our nice new Room 220, we were pleased that the snow storm held off!

Marilyn Keigley presented some of her excellent photos from many state parks and Camp Newaygo. We saw wildflowers from Saul Lake Bog, Rose Pogonia, Dwarf Hackberry, Burr Oak, Prairie Smoke, Pickeral Weed, Blue-eyed Grass, Milkweed, Snowflakes, and many more.

- Sue Chambers had many beautiful photos of Water Willow at Camp Newaygo, scenic views, bog plants, the WPC group on trails, Paw Paw flowers, Nodding Trillium, Star Flower, Teasel Cone, autumn leaves and many others.
- Roger Tharp had a great selection of lovely wildflowers.

Just some were: Cup Plant, Canada May Flower, False Solomon's Seal, Wild Indigo, Blazing Star, Bergamot, Trilliums, Violets, Ladies' Tresses, plus many more.

- Peg Lepo showed many of her beautiful shots of wildflowers in her garden, Monarch Butterfly on Milkweed, Black-Eyed Susan, Coreopsis close-up, Yellow Trillium, White Trillium, Bloodroot, and White Violet. She included a photo of our WPC members in the woods.
- Cal Lamoreaux brought a special rock sample that shows coral fossils from Rockport State Park.
- Bob Riepma brought his equipment and helped each photographer present their program. Thanks, Bob!

Many Thanks to these talented WPC photographers! We are so lucky to be able to see excellent wildflower programs presented by our own members.

February 11, we were delighted to have Dr. Garrett Crow as our featured speaker. Our large group of members had the opportunity to meet the newly elected MBC President and his lovely wife, Charlyn Crow, and their university daughter, Megan Crow. Dr. Crow presented an outstanding program on "Rediscovering Emma Cole's 19th Century Grand Rapids Flora", illustrated with colorful photos. He described a project that Emma Cole worked on called, "Where Have All The Flowers Gone?" Emma was a brilliant botanist who was born in 1843 and died in 1910. This fascinating woman lived in Grand Rapids, MI and began collecting plants there while teaching.

Emma had a very active life. She traveled throughout Michigan and in the USA and foreign countries. She amassed thousands of botany collections which are still in existence. How a single woman at that time traveled and collected botany samples is remarkable. John Ten Have, one of our WPC members, owns Clear Bottom Lake which is a place Emma visited to collect rare plants. Dr. Crow emphasized the need for saving our native plant populations, which was the focus of Emma Cole. She was determined to save our ecological treasures.

March 11, our featured speaker, Cal Lamoreaux, brought his wife, Jean Lamoreaux to help answer questions. They are active WPC members. The program "Ecosystems of California and Michigan", was fascinating. They traveled to each state many times and took lots of botanical photos and notes. Cal even talked about the geology of each area, the type of soil and hardness of plants.

Cal began his program in the east, and told many interesting facts. He said that Cadillac, MI is at 1200 feet of elevation and has the deepest soil in the world. Then Cal and Jean spent much time in California. According to Cal, palms are not trees and their growth is called "anomalous secondary growth". Palms grown all over the world and are found in California. Many plants are related to them such as Skunk Cabbage,

Green Dragon, Jack-in-the-Pulpit and Calla Lily.

We saw mountains, deserts, botanic gardens, the Giant Sequoia Tree Sanctuary and the Pacific reefs. Cal gave an excellent program on the many ecosystems found throughout our nation.

April 8, we met in Ontario Hall, Room 164, to meet Dr. Marilyn Keigley, retired professor from Ferris State University, who presented a program on "The Science and Beauty of Snowflakes". This was a study of snow crystals and included her fabulous photographs of these crystals. The close-up photos of each snowflake were beautiful and showed the individual difference of each flake. She said that a snowflake is winter's butterfly.

The phenomenon of snowflakes is that there is never a duplicate flake, as each one is individually formed. Marilyn displayed her special camera and lens and explained the difficult arrangements that she has to use to photograph snowflakes.

Did you know that records show people made drawings of snowflakes starting in 135 BC throughout China, Europe and Scandinavia? In 1885, William Bentley became the world's first person to mimeograph snowflake photos.

There are seven groups of snowflakes; stellar star, small plates, triangular, capped columns and caps, needles, irregular shapes, and rimmed with frost. All of these shapes are divided into 35 types of snowflakes. Marilyn showed objects, plants and animals that remind her of the hexagon shape of snowflakes, such as Petoskey stones, flowers with 6 petals, bird tails and butterfly wings.

Marilyn included many quotes in her interesting program. One was from Einstein, "Religion, art and science are all branches of the same tree".

May 6, Ranger Steven Mueller met us at Ody Brook Nature Sanctuary, for our first outdoor field trip this season. On this warm, sunny day all of our large group could see many blooming plants everywhere. Steve led us through big woods, fields, shrub areas, a wetland forest, streams and ponds. Large areas were covered with glorious colors of wildflowers.

Steve gave us much information about plants, such as if a plant blooms from the bottom of the stem and goes up it is called indeterminate. If it blooms from the top down, it is called determinate because you can determine how far it will bloom. Our members enjoyed this beautiful field trip and, as usual, learned a lot about plants from Ranger Steve Mueller.

May 26-29 at St. Ignace, the MBC State Foray, sponsored by the Huron Valley Chapter, had a fine Foray. Many of our WPC members participated. We were proud to see WPC member Craig Elston receive the MBC Distinguished Service Award presented by the MBC Vice President, Dan Skean. The award is a large wooden plaque with a ceramic insert of an Arisaema. Congratulations, Craig! Craig is the eleventh WPC member to

receive this award.

June 10, Chip Schaddelee led this interesting field trip to Ottawa Marsh in the Allegan State Game Area at 10:00 AM to noon. Chip was assisted by Bill Martinus. They explained some of the special features we would see. When Chip and Bill take you on a field trip, you learn much more about the ecology of West Michigan.

The area is known for its special plants, and we saw lots of them. Chip gave everyone a page of plants growing here in this Hardwood-Conifer Swamp. We are so lucky to live in West Michigan because the Transition Zone between northern and southern native plants is right here.

Chip explained how northern herbaceous plants come down this far from the north. The Southern Components come up north to the Transition Zone, but stop here. It is no wonder we have such great field trips as we can see such a variety of herbaceous plants! Most of us were not aware of the Transition Zone that separates northern and southern botanical varieties.

After a great field trip, we went to the Trestle Stop Restaurant for lunch. A big surprise awaited President Dorothy Sibley! The WPC members celebrated Dorothy's 90th birthday with a surprise birthday party, special cakes, and a huge poster made by Roger Tharp for everyone to sign. It was a day that she will always remember.

July 8, Cal Lamoreaux led a field trip to the Dolan Nature Sanctuary near Freeport. This is another new area for us. We explored 127 acres that are committed to rare and endangered species. Cal wrote an excellent review of this trip and explained how this sanctuary was formed over 80 years ago by Dr. James Maher. Last year it was transferred to the Michigan Nature Association.

The participants followed a well-worn path on the north bank of the Coldwater River. They saw a Michigan Lily and marveled at the size and majesty of ancient trees. Herb Robert, Bottle Brush Grass, Bloodroot, Ginger, and Ebony Spleenwort Fern were found. Going through the meadow section, they saw Black-eyed Susan, Bergamot, Dogbane, and Deptford Pink. After a 2 mile hike, everyone returned to enjoy cheese and crackers provided by Jean Lamoreaux.

August 19, Craig Elston will lead us on a Prairie Field Trip near Wabasis Lake. This is on private property owned by Carol Rottman, who began planting wildflower seeds in 2000. The property diversity consists of the prairie, bordered by a small lake and woods. Last fall the prairie was burned, so now some of the flowers to see are Bergamot, Prairie Coneflower, Campion, Compass Plant, Vervain, Ironweed and Goatsbeard. This unusual prairie will be a treasure to see.

September 9, Craig Dykstra, Parks Naturalist, has a special field trip for us starting at the Ottawa County Parks Nature Center at Hemlock Crossing. Melanie Manion, the Natural Resources Management Supervisor, will be our leader. After

introductions, she will take us to the nearby Port Sheldon Natural Area. It is just 10 minutes from the center. You will be amazed at the diverse botanical area we will visit.

October 7, the State-wide Fall Mini-Foray will be held at Pierce Cedar Creek Institute near Hastings, and will be hosted by the Southwest Chapter. This is an all day event, with field trips, dinner and a talk by MBC President Garrett Crow.

November 11 at 2:00 PM – 4:00 PM at GVSU, John Bagley, the Michigan Nature Association Regional Stewardship Organizer, will present "The Overview of the Michigan Nature Association." John will show plenty of photos of beautiful flowers and plants, and even animals as well. The MNA owns 170 sanctuaries, so we will see lots of great botanical areas.

December-no program for WPC members due to the busy holiday season.

During this year's 2017 MBC Spring Foray at St. Ignace, May 26-29, our WPC members sponsored three outstanding university students to attend. This is the twentieth year that our chapter, with the assistance of the MBC Foundation, has sent students from our area to an MBC Foray. We chose students who are interested in botany, and pay their total costs for the 4 day Foray. In the beginning, we sponsored 1 student, but in recent years we sent at least 3 or more due to the many nearby universities and colleges in our area. These three students took an active part in all activities and met many MBC members. Everyone was impressed with these students who gave such a great account of themselves:

Devani Antuma, Calvin College, recommended by Dr. Dave Warners

Gregory Manni, Calvin College, recommended by Dr. Dave Warners

Jacob Knapp, Grand Valley State University, recommended by Tim Evans

Note of Thanks

The successful meetings and field trips that we enjoy may be attributed to the excellent leaders who share their expertise during every program and field trip. We owe each leader many thanks. We look forward to an active 2018 year full of interesting and informative sessions, which will enable our members to learn about the amazing ecology of our state.

Dorothy A. Sibley

President, White Pine Chapter

Southwestern Chapter Report

August 2016 – July 2017

Field Trips, Programs & other Happenings

August 24, 2016 Field Trip – Asylum Lake Preserve

As summer was drawing to a close last year, we joined with the Kalamazoo Chapter of Wild Ones for an evening field trip to Asylum Lake Preserve, which is owned by Western Michigan University. Steve Keto, Natural Areas & Preserves Manager for WMU, led us through the preserve, showing us examples of the differences between managed and unmanaged areas and the effects of fragmentation on diversity. He also described the challenges of maintaining connectivity and conductivity of natural areas in the face of increasing development pressure.

MBC 2016 Foray – Labor Day Weekend in Kalamazoo

The Southwestern Chapter continued its late summer 2016 activities by hosting the MBC 2016 Foray in Kalamazoo over the Labor Day weekend. The Foray offered field trips to coastal plain marshes, bogs, prairie fens, savannas, prairies and forests found in the Kalamazoo area. Excellent evening programs were presented by Tony Reznicek, Garrett Crow and Todd Barkman. As an added treat, the Club celebrated its 75th Anniversary. The Foray was well-attended and well-received. (See the April 2017 Arisaema for a more complete report on the 2016 Foray.)

September 24, 2016 Field Trip – Prairie Ronde & Sauk Indian Trail Plant Preserves (MNA)

John Bagley, the Michigan Nature Association (MNA) Regional Stewardship Organizer for west Michigan, guided us as we explored these two prairie remnants south of Kalamazoo that contain very rare plant communities. The flora display found on these two small but special places never disappoints. Sauk is the best dry-mesic remnant in Michigan and has the largest population of Prairie Coreopsis. Prairie Ronde Preserve features Rattlesnake Master and the largest population of White Wild Indigo.

October 17, 2016 Evening Program – Impact of Invasive Spotted Knapweed on a Threatened Dune Thistle – Dr. Binney Girdler, Associate Professor of Biology at Kalamazoo College, reported on almost 10 years of work on Pitcher's Thistle populations on Beaver Island in northern Lake Michigan. Her research has found that despite increasing Spotted Knapweed populations, the Pitcher's Thistle populations on Beaver Island dunes have not suffered. Her research has found that the two species are aggregated in like-species patches, suggesting their environmental preferences may not substantially overlap.

After taking a break for the holidays, the Chapter turned a page in January 2017 by augmenting and reorganizing the leadership group. The following members volunteered to serve: Dave Wendling as President; Michael Dombos as Vice-

President; Lynn Steil as Corresponding Secretary; Wayne Roussel continuing as Treasurer; Cheryl Lyon-Jenness as Chair of Programs; and Tyler Bassett as Webmaster. Thanks very much to these volunteers and to all others who have volunteered to help.

February 20, 2017 Evening Program – Catching up on Invasive Plants and their Impact -- Nate Fuller, Conservation & Stewardship Director of the Southwest Michigan Land Conservancy (SWMLC), explained the adverse cascading consequences of invasive plants and discussed efforts underway to prevent their spread and to restore natural communities. Citing local natural areas as examples, Nate described how invasive plants can alter soil chemistry, disrupt food webs, and change the foundation of a natural community.

March 20, 2017 Evening Program – A Sense of Place: The Past, Present and Future of Southwest Michigan's Characteristic Natural Communities – Dr. Tyler Bassett, our former Chapter President and currently a research associate at MSU, discussed the defining features of southwest Michigan's natural landscape, as well as how this landscape influenced and was influenced by European settlement. Historically, the vegetation of southwest Michigan was a mosaic of prairies, savannas, and wetlands integrated within a matrix of dense forest. As Europeans began to settle the area in the early 1800s, the distribution of available timber and fertile agricultural soil determined where settlement occurred. Today, only small remnants of the historical landscape remain. As research associate at MSU, Tyler is working to improve the future of the landscape by studying conservation and restoration of native plant species and how native plants support ecosystem function.

April 17, 2017 Evening Program – An April Potluck and Coming Attractions

Traditionally, the Chapter's annual potluck get-together was held in December, which often meant bundling up and negotiating icy roads. We decided to try shifting the potluck to spring, to celebrate the melting of the snow and the beginning of our field trip season. With the Spring Foray at St. Ignace only a month away, Becky Csia presented a small selection of slides of signature wildflowers of the St. Ignace area -- photos she took in 2004 at the previous Spring Foray held there. Then, Dave Wendling, Chapter President, previewed the Chapter's upcoming field trips and the MBC Fall State Board Meeting & Mini-Foray, which the Southwestern Chapter is hosting at Pierce Cedar Creek Institute on October 7 & 8. (See separate article in this Arisaema).

May 6, 2017 Field Trip – Dowagiac Woods Nature Sanctuary (MNA)

On a beautiful Saturday morning, John Bagley, MNA Regional Stewardship Organizer, and Dave Wendling, our Chapter

President, led a group of about 20 plant enthusiasts through the incomparable 284-acre Dowagiac Woods Preserve at peak display of spring wildflowers. More than 50 species of wildflowers in breathtaking abundance carpet the floor of this high-quality southern mesic forest, hardwood swamp and river floodplain. As if the wildflowers were not enough, we also found and examined an array of ferns and mosses.

June 17, 2017 Field Trip – Paw Paw Prairie Fen Preserve (TNC)

Scott Namestnik, Botanist with Orbis Environmental Consulting and board member for the Indiana Native Plant & Wildflower Society (North Chapter), deftly guided us through this large, intact and beautiful prairie fen that has no boardwalks or designated trails. The fen is part of a 106-acre Nature Conservancy preserve. Over 200 vascular plant species, including several Michigan threatened and endangered species, have been documented in this prairie fen. Highlights of plants we saw in bloom include: Seneca Snakeroot, 100's of individuals of the yellow variety of Indian Paintbrush (*Castilleja coccinea*); three species of bladderwort; and several species of orchid, including Ragged Fringed Orchid, Green Twayblade, Grass-Pink, dozens of Tall White Bog Orchids, and 100's & 100's of Rose Pogonia.

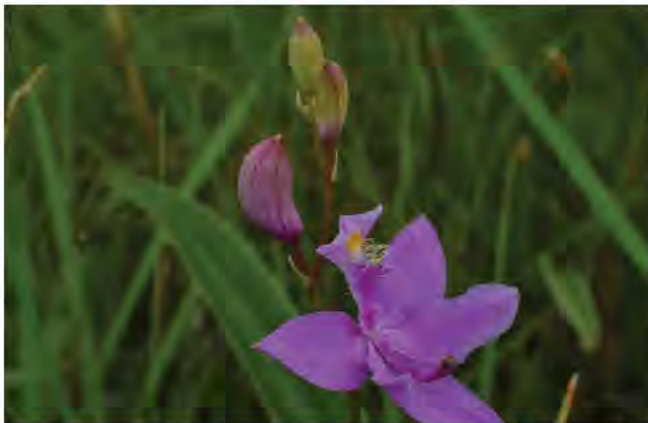


Photos by Scott Namestnik

July 22, 2017 Field Trip – Portman Preserve (SWMLC): A Sweet Slice of the Historical Landscape

A 2008 survey by trip leader Tyler Bassett documented 446 plant species on the 188-acre property that would become this new Southwest Michigan Land Conservancy preserve. We didn't see all 446 species, but with Tyler guiding us, we certainly saw a lot of them as we scrambled across steep woodland slopes and tested our footing in the fen. This preserve offers a patchwork of exemplary natural communities – oak savanna & woodland, hardwood swamp, shrub swamp and prairie fen – and provides a glimpse of how these communities historically interacted across the landscape. Highlights of plants we saw in bloom include: Marsh Blazing-Star; Tuberous Indian Plantain; Prairie Loosestrife (*Lysimachia quadriflora*); White Camas; Marsh Bellflower; and Tall Bellflower.

Upcoming Activities: For the remainder of 2017, the Chapter looks forward to a late August field trip to Butternut Creek Fen, to hosting the MBC Fall State Board Meeting & Mini-Foray in October, and to our fall indoor programs -- the first of which Jesse Lincoln will present on October 16 ("Ecological Surveys of Southern Michigan: Reflections on the Importance of Public Lands") and the next, Garrett Crow will present on November 20 ("Adaptation of Plants to the Aquatic Environment").



*In Memoriam***Elizabeth (Betty) Peebles**

Members of the Red Cedar Chapter will undoubtedly remember Betty Peebles, who quietly passed away December 2016 at the age of 83. Betty graduated from the University of Michigan with a degree in Botany, and was a very active member of MBC. She was MBC Secretary for a number of years and an early member of the Isobel Dickinson Award Committee. Betty and her husband Bob were Charter Members of Red Cedar Chapter and participated in forays, field trips, and many leadership roles throughout their decades of membership in MBC. They were jointly awarded the Distinguished Service Award in 2001. Bob is currently residing in Mason, MI.

As Secretary of the Club, Betty retained several years of hand-written MBC State Board Meeting minutes and communication materials. These documents were donated to the archives of the Bentley Historical Library in Ann Arbor.

Some of you may not have known that Betty's Mother, Ruth Brede, was an artist/illustrator who drew the illustrations for Helen Smith's very popular wildflower book, "Michigan Wildflowers". Betty and her mother spent time at the University of Michigan Biological Station where Betty met Bob Peebles. Bob was thrilled to meet her because it was the first time he had met a girl who loved insects and flowers and all the nature that he loved.

Submitted by Irene Eiseman

Peter Kaufman

Some MBC members may remember Peter Kaufman, former president of the Michigan Botanical Club at the time of the MBC Gwen Frostic Poster campaign. The posters were to be posted in all the schools to educate children on the importance of protecting plants. He is likely a founding member of the Huron Valley Chapter. He was Professor of Plant Physiology at University of Michigan where he remained until his retirement well into his 80's. He worked at the Complementary & Alternative Medicine Center getting grants for medical applications for tart cherries. He was also a past president of the Michigan Natural Areas Council. He brought humor and joy to everyone he met. He was a very devoted father to his two daughters; Linda Ryan and Laura Kaufman. He fulfilled his dream of having the Hazel S. Kaufman retreat center at his house which brought many people together.



Submitted by Sarah Noodén

MICHIGAN BOTANICAL CLUB

The Michigan Botanical Club, the native plant society of Michigan, promotes through its aims, the understanding, enjoyment and preservation of our Great Lakes flora, and the conservation of our natural heritage. The Club is a 501(c)(3) non-profit organization founded in 1941.

AIMS

- Conservation of all native plants.
- Education of the public to appreciate and to preserve plant life.
- Sponsorship of research and publications on plant life.
- Sponsorship of legislation to promote the preservation of Michigan native flora.
- Establishment of suitable sanctuaries and natural areas.
- Cooperation in programs concerned with the use and conservation of all natural resources and scenic features.



